UNIVERSITI TEKNOLOGI MARA

CISCO ASSISTED LEARNING BASED ON ROUTING AND SWITCHING

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ABSTRACT

In the process learning computer network systems, the use of virtual laboratories is very important such as Cisco Packet Tracer. Currently, Cisco provide a file activity to learn about the network topology but in one file activity per topic. Hence, in one type file activity was created that contain one and more topic in just one type of file activity to make it easier for learning to understand configuration. This type of file activity will contain many routings and switching protocol such as for routing RIP, EIGRP, and OSPF. In this type of file, there will be a topology that student or instructor need to fill the configuration inside the topology, the score will be given by how much the student or instructor correctly filled the configuration. Every step the instruction given will provide a point that will be review after the configuration is done. The development of the topology needs software which is packet tracer and also hardware which is laptop/computer. The topology has been successfully developed, and it is hoped to be implemented in syllabus and configuration competition.

CHAPTER 1

1.1 Background of Study

Cisco Systems Inc. is the global pioneer in Internet networking. The business was established in 1984 by two Stanford University computer scientists searching for a simpler way to link various forms of computer systems. Cisco Networking is a network that links laptops, cell phones, peripherals and IoT products. Switch, routers, and wireless access points are important aspects of networking. The computers attached to your network will interact with each other and with other networks, such as the Internet. Currently, networks may be created by linking various items, such as computers, tablets, scanners, handheld devices, etc., wired or wirelessly. (Derouin, R., Fritzsche, B. and Salas, E. 2005). People should think about the machines people use at home as part of a network. Since the Internet is a network, there are just speed limitations and quotas. Independent networks may exchange information or documents with each other on the Internet. In general, multiple computers can be linked to different cables and a network can be built via visual interfaces. But that would require both extra physical space and redundant cable redundancy as well as new interfaces. Switches have been created for this reason. With these switches, we can provide multiple computers to communicate and share with each other. (Jayaprakash, R., Saroja, K. 2015).

Cisco's networking systems link individuals, computing devices and data networks, enabling users to view or share information irrespective of time, distance or type of computer system. The Cisco Networking Academy® curriculum is built to keep pace with the development of networking infrastructure by offering creative curricula and instructional resources that help students recognize the dynamics of information and communication technologies (ICTs). In this context, the Cisco ® Packet Tracer e-learning platform was built to help students at the Networking Academy acquire realistic networking expertise in a constantly evolving world. Students pursuing ICT expertise will now benefit from online curricula and innovative tools for interactive networking, teamwork and competitiveness. (Kamiloglu, M. 2015).